Flow Modulator (M.F.M) to treat these aneurysms and try to avoid some major complications.
Methods: This M.F.M is a 3 Dimensional braided tube made of several interconnected layers without any covering. Our earlier tests through studies as theorical simulation, computerized Fluid Dynamics, Molecular Modelization, Finite Elements Analysis and through in vivo tests demonstrate that in an Aortic Aneurysm this M.F.M: - eliminates the damaging flow vortex pressure, - laminates and redirects its flow along the wall, - directs and increases the flow in the collateral branches which remain patent (any artery can be covered with the stent without compromising the flow). This MFM prevents the aneurismal rupture and leads to progressive thrombosis and shrinkage of this aneurysm.
Results: 9 TAAA, 5 AAA (4 extended to both iliac arteries) in 14 very high risk compassionate cases (Male: 12, mean age 66 y.) were treated with the MFM. Technical success: 100%. Average MFM used: 1 to 4 units implanted by femoral approach. No periprocedural complications. - 30 day outcomes • Branch patency 100% • No death • Neurological complications: 0 - Follow up: 1 to 36 months • 2 deaths at M6 M8 not stent related (stroke) • Branch patency: 100% • Progressive sac thrombosis and shrinkage depending on importance of collaterals. Diameters and volume evolution of aneurysms will be presented.
Conclusions: A new concept of stent, the MFM (without any covering) is developed to treat aneurysms. It laminates the flow inside the aneurismal sac reducing the risk of rupture and allows to cover any artery. It opens a new approach to treat TAAA and AAA. The first results seem promising, avoiding some major complications encountered with endografts. A larger study is ongoing.

TCT-117

Peri-procedural and Follow up Outcomes after Endovascular Abdominal Aortic Aneurysm Repair by Interventional Cardiologists

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Background: Endovascular repair of abdominal aortic aneurysm (AAA) is a minimally invasive treatment for AAA and has recently been made a class I indication in the treatment of AAA. In comparison to the conventional open surgical treatment, endovascular AAA repair (EVAR) is associated with equivalent long-term morbidity and mortality rates. Vascular surgeons perform majority of EVAR. There are no reports for the long-term results of this intervention performed by Interventional Cardiologists. We hypothesized that EVAR performed by Interventional Cardiologists can have good peri-procedural and long-term success rates.
Methods: Retrospective chart review on patients with attempted EVAR between September 2005 and January 2011 was performed. Included cases were all consecutive patients who had attempted EVAR by Interventional Cardiologists with available on site Vascular Surgery support. Data collection included demographics, aneurysm specific data, comorbidities, length of stay, peri-procedural complications and follow up outcomes.
Results: During the study period EVAR was attempted in 170 patients, with 27% being women. The mean age was 72.1 years (range 52 to 93). The endovascular graft placement was successful in 96% (163/170) of patients. Procedure failures were more common in women (6 of 46 Vs 1 of 124, p = 0.002). In 5 patients the device could not be deployed successfully due to unfavorable anatomy. The 30-day mortality was 1.8 % (3 of 170). In patients with successful EVAR the mean follow up was 30 months (range 2 to 66 months) and mean length of hospital stay was 3.5+/− 3.2 days. Major peri-procedural complications were noted in 7% patients (12 of 167). During follow up, five patients (3%) required re-intervention and additional 16 patients died with no aneurysm related deaths.
Conclusions: This is the one of the first reports of EVAR primarily performed by Interventional Cardiologists, which demonstrates high peri-procedural and long-term success rates. A higher EVAR failure rate has been observed in women. EVAR can have a significant place in a successful Interventional Cardiology practice.

TCT-118

Successful EVAR For Short-necked Abdominal Aortic Aneurysms Using Balloon Expandable Stents By Interventional Cardiologists

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Background: Conventionally, inclusion criteria for endovascular AAA repair (EVAR) include 15 mm aortic neck length and exclusion criteria include increased proximal angulations. Typically, short-necked aneurysms display increased proximal angulations, hence increasing the complexity of EVAR. Recently, updated EVAR techniques have been used for the treatment of short-necked and juxtarenal AAA. There are no reports regarding the short and long term outcomes of this intervention for short-necked aneurysms primarily performed by Interventional Cardiologists.
Methods: Retrospective chart review was performed on all patients with attempted EVAR between September 2005 and January 2011. Short-necked AAA was defined as ≤ 15 mm length of normal aorta below the lowest renal artery.
Results: EVAR was attempted in 170 consecutive AAA patients, with 11% (18 of 170) being short necked. Women comprised 28% in both the groups (5 of 18 Vs 42 of 152; p=NS). Baseline characteristics and follow-up duration were similar in both groups. Three patients died within 30 days and endograft delivery was not successful in an additional 4 patients. Procedural failures were more common in women (6 of 46 Vs 1 of 124, p = 0.002). There was no significant difference for failure rate based on neck length (0 of 18 Vs 7 of 152; p=NS). Short-necked aneurysms required non-covered balloon expandable stents more commonly for either proper fixation or for type I endoleak (16 of 18 Vs 25 of 152; p<0.001). In patients with successful EVAR the mean follow up was 30 months (range 2 to 66). Major peri-procedural complications were noted in 7% patients (12 of 167). There was no significant difference in short necked and other AAA in terms of 30-day mortality, development of renal failure, leg ischemia, development of endoleaks or other complications. During follow up, re-intervention was needed in 0 of 18 short-necked Vs 5 of 152 other AAA (p=NS).
Conclusions: Modifying EVAR by using balloon expandable stents can successfully treat short-necked AAA, suggesting a potential novel approach to such patients. This is one of the first reports showing high peri-procedural and long-term success rates for such aneurysms performed by Interventional Cardiologists.

TCT-119

The Clinical Significance Of Coronary Angiography In Elderly Patients Undergoing Endovascular Repair For Type B Aortic Dissection

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Background: Although sharing some common risk factors with and predicting worse prognosis of type B aortic dissection,the incidence of concomitant coronary artery disease in patients with type B dissection has not been studied comprehensively.
Methods: From January 2008 to December 2010, coronary angiography was routinely performed before aortography and endovascular repair to detect and quantify CAD in 134 consecutive Standford type B AD patients who were older than 50 years.Data pertaining to clinical and imaging details were prospectively collected and evaluated.$\chi 2$ test,or the Fisher exact test when the expected frequency was <5,was used to analyses the data Logistic regression was applied to determine the predictors of concomitant CAD.
Results: Coronary angiography showed 35 patients (26.1%) had CAD,among them,22 (16.4%) had single-vessel disease (SVD), 9 (6.7%) had 2VD(BVD) , 4 (3.0%) had 3VD(TVD) or left main disease (LM). Multi-variance logistic analysis showed that male gender (OR=6.682,95% CI:1.01-44.13,p=0.049) and smoking (OR=3.513, 95% CI: 1.05-11.70, p=0.041) were the strongest predictors of Standford type B AD coexisted with CAD.
Conclusions: The incidence of CAD in patients older than 50 years with Standford type B AD is relatively high.Given the significantly negative impact on the prognosis,concomitant coronary artery disease should be screened routinely by coronary angiography before endovascular repair in type B dissection patients who are older than 50 years.

TCT-120

The Policy Of Total Percutaneous Abdominal Aortic Aneurysm Repair: One-year Follow-up

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Background: Endovascular abdominal aortic aneurysm repair (EVAR) is accepted therapeutic strategy. The use of a total percutaneous approach to endovascular repair of aortic pathology is becoming more common and further extends the EVAR indications. The aim of our retrospective analysis was assessment of safety, technical success, and mid-term results of elective patients scheduled for total percutaneous EVAR implantation (PEVAR).
Methods: Sixty-two consecutive patients (M:F 57:5, age 70±9 years, maximal AAA diameter 61±14mm) underwent elective PEVAR between 1/2009 and 12/2010. All patients were treated in local anesthesia by total percutaneous approach via femoral access using the preclose technique with the Prostar XL suture-mediated closure device (Abbott Vascular, US). The immediate technical success of stentgraft implantation, and the presence of 30-days and 1-year complication rate were assessed.
Results: In all 62 patients (100%) there was immediate technical success of procedure, with no need of conversion to open surgery. There was one case of prerenal failure (1.6%), and one case of acute bowel ischemia (1.6%) at 30-days follow-up. Repeat intervention was needed in 8% (5pts). Event-free survival at 30-days was 89% (55/62pts). There were 16 cases of the femoral artery pseudoaneurysm per 124 punctures (13%), all treated by compression or by percutaneous thrombin injection. Anticoagulation therapy emerged as the risk factor for the femoral artery pseudoaneurysm occurrence (OR 5.75, 95% CI 1.89-17.5, p=0.003). At one-year follow-up period the mortality increased to 9.6% (6 pts), overall event-free survival was 81% (mortality/MI/stroke/reintervention/ severe ischemic complication).
Conclusions: The policy of total percutaneous endovascular abdominal aortic aneurysm repair is linked with low mortality and acceptable complication rate in pts scheduled for EVAR implantation. Anticoagulation therapy is the risk factor for the femoral artery pseudoaneurysm occurrence after PEVAR. The correct indication, technical realization, and adequate periprocedural management are essential for further reduction of adverse events after PEVAR.